Inquiry into impacts of mining MDB

Submission

Inquiry into impacts of mining in the Murray Darling Basin

Senate Standing Committee on
Environment, Communications and the Arts

Queensland Murray-Darling Committee Inc.
Submission (Amended 28/09/09)

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This submission is presented by the Chief Executive Officer on behalf of the Queensland Murray-Darling Committee Inc, or QMDC. QMDC is a regional natural resource management (NRM) group that supports communities to sustainably manage their natural resources.

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Queensland Murray Darling Committee
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Summary

Development of the Surat and Bowen Basin energy reserves in Queensland has the potential to impose considerable local and cumulative impacts to the natural resource assets and values in the Queensland section and headwaters of the Murray-Darling Basin.

Overall our organisation is not adverse to mining activity if the below issues can be effectively managed, mitigated or preferably avoided.

The items below are identified in the Region's Natural Resource Management (NRM) Plans, approved by State and Federal Governments (Joint Steering Committee). Outlined are issues associated with mining and energy industry activities that may cause considerable impact at the local and cumulative levels.

Biodiversity
Issue: continued decline in vegetation extent through clearing and the loss of habitat through fragmenting of remnant vegetation. This includes EPBC communities.

Water Quality
Issue: pollution/sedimentation of water ways (rivers, creeks and wetlands) from erosion off mine sites and spoil heaps; leakages and possible overtopping of settling ponds or evaporation ponds; erosion caused by associated infrastructure (roads, pipelines etc).

Riverine/Wetlands
Issue: modification of river and floodplains flows caused by creek, and river diversions and floodplain levy banks diverting flows. This leads to erosion of floodplains and creek bank erosion, and slumping and decline in stream and floodplain ecological values.

Salinity
Issue: waste water with high salt content has the potential to be used (irrigation) or leak and damage farming land and creeks, rivers and wetlands. Also there are risks associated with the physical disturbance of the soil profile, and mobilisation of large amounts of stored salt.

Land Use
Issue: mining that utilises areas of good quality soil (agricultural land) and is not able to be rehabilitated could mean productive farming land is lost forever.

Weeds & Pests
Issue: pest animal and plant (weed seed) spread from machinery and other vehicles.

The Queensland Murray-Daring Committee has been working with its region's community to develop a detailed policy position and framework for the Queensland Murray-Darling Basin to respond to existing and emerging issues relating to impacts on natural resources from mining and energy industry activities. This policy provides the basis for this submission which has undergone community consultation.

Background

The Queensland Murray-Darling Committee Inc., or QMDC, is a natural resource management (NRM) organisation that supports communities to sustainably manage their natural resources. QMDC's vision is working towards the equitable, efficient and sustainable use of water, land and other environmental resources of the Queensland Murray-Darling Basin.

The development of regional NRM plans is underpinned by a number of principles. QMDC believes that these principles should apply to the protection and sustainable use of the region's natural resources in relation to the development of the mining and energy industries.

- Address causes not symptoms
- Alignment of planning processes
- Consistency with other policies
- Conservation of natural assets
- Sustainable use of natural resources
- Ecologically sustainable development
- Precautionary principle
- Community based process
- Effective engagement of stakeholders
- Continuous development and improvement
- Capacity building to ensure quality of ongoing process
- Best available science
- Objectivity and transparency

Further to this a number of foundational principles inform our specific response to the mining and energy industry.

1. Prevent impacts on natural resources from occurring. Where an impact can not be prevented it should be minimised; and rehabilitated to the natural resource assets' former value and function.
2. The baseline assets and their values are set out in the Regional NRM Plans.
3. Cumulative impacts on natural resources are considered and prevented – whereby individual site impacts across multiple sites over multiple years are considered.
4. Impact thresholds are determined for each asset defining the point at which an impact is no longer acceptable.
5. Public consultation and disclosure of information, including monitoring data is expected.
6. Existing legislation is applied where it adequately protects the assets identified in the Regional NRM Plans.

1. Impacts to environmental values in the Queensland Murray-Darling Basin

Riverine, Floodplains and Wetlands (surface flows)

Issues:

- ***Modification of river and floodplains flows caused by creek and river diversions and floodplain levy banks diverting flows.***
- ***Consequential erosion of floodplains and creek banks erosion and slumping, and decline in floodplain ecological values.***
- ***Interference with natural flows and ecological functioning (eg fish breeding and in-stream connectivity).***
- ***Coal seam deposits underlay significant areas of alluvial plains and piedmont fans in the Queensland Murray-Darling Basin.***
- ***Aesthetic, social and cultural values diminished.***

Legislation protecting asset:

- *Integrated Planning Act 1997 (IPA)* (Qld) - provide for works that take or interfere with water in a watercourse, lake, spring aquifer, or from overland flow.

Action:

- Prevent cumulative impacts from mining and energy industries on the riverine, floodplain and wetland assets, function and values in the Queensland Murray-Darling Basin.

- Prevent direct and indirect impacts from mining and energy industry activities.

a. Buffer zones appropriate to Stream Order (eg 7, 6 - 1km, and 5, 4 - 500m).

b. No activity undertaken on Stream Orders 4, 5, 6, and 7.

c. No off-site movement of soil, salt, contaminants and weeds to riverine, floodplain and wetland areas, either directly or through landscape processes.

d. No alteration to surface water flow systems and subsequent interaction with ground water flow systems.

e. Minimise impact through appropriate planning and design for Stream Orders 1, 2 and 3; considering values and function, taking into account: In-*stream* flow regimes Surface Water Flow Systems (including potential salinity, erosion, ground water interface, barriers to movement of flow and in-stream species risks); Ground Water Flow Systems; riparian function (ground cover, bank stability, habitat, connectivity); wetland and floodplain function.

f. Water quality baseline indicators are appropriate to sub-catchment levels.

g. Rehabilitate to its former function and value.

h. Mines are required to comply with Darling Downs Floodplain Plan. Guidelines produced by the former Department of Natural Resources and Mines to prevent changes in overland flood flows on floodplains.

Regional targets for riverine, floodplain and wetland assets in the Queensland Murray-Darling Basin:

- *Priority riverine, aquatic, wetland, floodplain and riparian ecosystems are maintained or improved relative to baseline conditions.*
- *Flow regimes for health of wetland organisms are maintained or improved against baseline conditions.*
- *Balance ensured between ecosystem health and water use by achieving priority water quality objectives.*
- *The following key water quality indicators remain below baseline levels within specified conditions:*
  - *Salinity concentrations at end of valley locations*
  - *Total suspended sediment loads*
  - *Pesticide concentrations*
  - *Nutrient concentrations*

Vegetation and Biodiversity

Issues:

- ***Continued decline in vegetation extent through clearing and the loss of habitat through fragmenting of remnant vegetation.***
- ***Regional Ecosystems and listed Ecological Communities at risk.***

Legislation protecting asset:

- *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) – listed Ecological Communities in the Queensland Murray-Darling Basin are at risk.
- *Vegetation Management Act 1999* (Qld) – remnant vegetation protected under this Act can be cleared with exemptions.

Action:

- Prevent cumulative impacts from mining and energy industries on landscape functions of native vegetation coverage, ecosystem linkages, ecological processes and biodiversity condition in the Murray-Darling Basin.

- Prevent individual site impacts from mining and energy industry activities.

a. Minimise the need for clearing through appropriate planning and design.

b. Offset with native vegetation within the local area to cause no cumulative impact (or net loss) in the Queensland Murray-Darling Basin.

c. Land is required to be rehabilitated to its former value and extent, with native (local) vegetation.

Regional targets for baseline vegetation and biodiversity assets in the Queensland Murray-Darling Basin:

- *Priority landscape scale ecosystems are maintained or improved.*
- *Nature assets including native vegetation is managed or conserved to maintain ecological processes and ecosystem linkages, and increased in extent and abundance at priority catchment scales.*
- *Increase in area of sustainably managed native vegetation for landscape and biodiversity outcomes through traditional and innovative economic uses.*
- *Areas of identified high nature conservation significance are maintained in current condition and improved against the Common Nature Conservation Classification System.*
- *Decline in populations of 'at risk' flora and fauna species are halted.*
- *The biodiversity condition and ecological health of native vegetation in priority catchments are maintained or improved.*

Weeds and Pests

Issues:

- ***Invasive animal and plant (weed seed) spread from machinery and other vehicles.***
- ***Weeds of National Significance (WoNS) and the regional priority pests/weeds introduction and/or spread in the region, at the headwaters of the Murray-Darling Basin.***
- ***Need for coordinated planning and action on prevention, rapid response and on-going control of priority species, with State and Local Governments, landholder groups, other industries, and community.***

Legislation to protect assets:

- Land Protection (Pest and Stock Route Management) Act 2002 (Qld)

Action:

- Prevent cumulative impacts from mining and energy industries, caused by the introduction or spread of invasive plants and animals, posing a threat to riverine, floodplain, biodiversity, land and soil, and cultural assets and function in the Queensland Murray-Darling Basin.

- Prevent direct and indirect impacts from mining and energy industries causing the introduction or spread of invasive plants in the Murray-Darling Basin.

  a. Identification of risk at all stages of exploration, production and rehabilitation of mining and energy industry and associated activities.

  b. Site, property and district pest management planning to mitigate risk.

  c. Compliance of all stages of operations (and operators) to prevention strategies identified in pest management plans, consistent with existing legislation.

- Respond to the direct or indirect introduction or spread of invasive plants or animals, or where there are existing invasive plants or animals in the Queensland Murray-Darling Basin.

  a. Prevent further spread.

  b. Actively manage in accordance with existing legislation and best management practice.

Regional targets for weeds and pest animal threats to assets in the Queensland Murray-Darling Basin:

- *The extent and impact of priority terrestrial and aquatic weeds and pests stabilised by 2015, and decreasing by 2025.*
- *Reduce incidence of recorded infestations of new weed and pest outbreaks.*

2. Impacts to the Murray-Darling Plan and agricultural productivity in the Queensland Murray-Darling Basin

Associated Water (includes CSG waste water and ground water)

Issues:

- ***Pollution or sedimentation of water ways (rivers, creeks and wetlands) from erosion off mine sites and spoil heaps; leakages and possible overtopping of settling ponds or evaporation ponds.***
- ***Impacts to ground water flow systems***
- ***Impacts to Great Artesian Basin***
- ***There is no public disclosure of monitoring results or consistent approach, especially in regard to parameters, thresholds and cumulative impact.***
- ***If Coal Seam Gas water used for 'beneficial use' is excluded from the state Water Resource Plans and therefore Commonwealth Murray Darling Basin Plan there are limitations to management of this water resource regarding:***
    - *total management plan of available water (eg supplement for irrigation, or stream flows);*
    - *identification of risks to Basin water resources, such as climate change, and strategies to manage those risks;*
    - *requirements for use of this water;*
    - *optimising environmental outcomes for the Basin;*
    - *considering and quantifying impacts to water quality and salinity; and*
    - *rules about trading of water rights in relation to Basin water resources.*

Legislation to protect asset:

- *Water Act 2007* (Cwlth) - The Basin Plan (required under this Act) will be complemented by water resource plans prepared by Basin states, however Coal Seam Gas water is not considered in the Queensland *Water Act 2000*.
- Water Resource Planning (under *Water Act 2000* Queensland) is designed to plan for the allocation and sustainable management of water to meet Queensland's future water requirements. Coal Seam Gas water is exempt from this planning and Act unless traded.

Action:

- Prevent cumulative impacts from mining and energy industries on the surface and ground water flow system assets and function in the Queensland Murray-Darling Basin.

- Prevent direct and indirect impacts from mining and energy industries activities.

a. Buffer zones appropriate to the surface water flow system and ground water flow system, taking into account the interaction between surface and ground water systems.

b. No alteration to surface water flow systems and ground water flow systems.

- Prevent direct disturbance to surface water flow systems.

a. No activity undertaken on floodplains.

b. Minimise impacts at a landscape level through appropriate planning and design.

c. Discharges to streams should not exceed long term ambient water quality levels.

d. Within current floodplain management infrastructure guidelines.

e. Compliant with existing legislation applicable to surface and ground water.

f. Rehabilitated to its former function and value.

- Prevent direct disturbance to ground water flow systems.

a. Activities are not undertaken where the impacts are not known or understood.

b. Activities are not undertaken where there are known impacts to stock and domestic or irrigation supplies.

c. Minimise impact to ground water flow systems through appropriate planning and design.

- Impact on surface water flow systems and ground water flow systems are:

a. Within Water Resource Plan guidelines for the appropriate catchment.

b. Subject to Water Resource Plans and associated legislation regulating changes to overland flow and surface water flow systems.

- Mining and energy industry re-injection of associated water into aquifers is:

a. Subject to agreed definition of a ‘safe’ aquifer for re-injection disposal.

b. Must not have impact on the Great Artesian Basin.

- Mining and energy industry associated water made available for beneficial use is subject to:

a. Risk assessments based on the immediate, future or cumulative impact which may result from its use, taking into account salinity, surface and ground water interaction, changes to overland flow, and infrastructure development.

b. Existing legislation, including Water Resource Plans for the relevant catchment and associated Land and Water Management Plans.

- Mining and energy industry associated water (including by-products) not injected into aquifers or beneficially used, is:

a. Subject to Water Resource Plan guidelines for the appropriate catchment.

b. Subject to Water Resource Plans and associated legislation regulating changes to overland flow and surface water flow systems.

c. Aggregated only where risk and safety measures are appropriate for the volume of water and storage location within the landscape.

d. Disposed of in a manner whereby 'disposal' is defined against specific criteria and limitations that mitigates the risk and safety associated with the storage, transport, and destination, cumulative and long-term impacts of such volumes of water.

e. The 'disposal' of associated water within natural systems does not impact on the ecological functioning of that system.

f. Where associated water is 'disposed' of into a natural system the water quality parameters are within locally established guidelines or historical baseline.

Regional targets for surface water and ground water and associated flow systems assets in the Queensland Murray-Darling Basin:

- *Water assets are sustainably managed in a conjunctive manner to include:*
  - *Water use efficiency measures for high water use industries/sectors.*
  - *Stabilise groundwater levels for high priority sub artesian ground water systems and reduce decline in pressure in the Great Artesian Basin.*
  - *Achieve trading rules in accordance with water allocation security objectives as defined by the final Condamine Balonne, Border Rivers, Moonie Water Resource Plans.*
  - *Achieve ecological outcomes, in accordance with Environmental Flow Objectives as specified in the Condamine Balonne, Border Rivers, Moonie and Warrego, Paroo, Bulloo and Nebine Water Resource Plans.*

Land and Soils (agricultural land)

Issue:

- ***Mining that utilises areas of good quality soil (agricultural land) and is not able to be rehabilitated could mean productive farming land is lost forever.***
- ***At December 2009 4.5M Ha of Good Quality Agricultural Land was under Coal permits (application or granted) in the Queensland Murray-Darling Basin.***
- ***The Queensland Government recognises that good quality agricultural land is a finite resource that must be conserved and managed for the longer term, and that protecting it from unnecessary development is essential for maintaining the future productivity and efficiency of Queensland's rural industries. However – projects of 'state significance' override government policy on this issue. It also therefore removes Local Government provisions for the protection of land in strategic plans, development control plans and other elements of planning schemes.***
- ***To date, the Queensland Government has not provided adequate mapping information to identify the four classes of agricultural land. Therefore making it difficult to identify and protect 'Class A' (crop land) separate from Class B (limited crop land) is where agricultural land is scarce, and Class C (pasture land) is where pastoral industries predominate, which are all considered to be good quality agricultural land.***

Legislation protecting asset:

- Queensland Government State Planning Policy 1/92: Development and the Conservation of Agricultural Land
- *Integrated Planning Act 1997 (IPA)* (Qld)
- Local Government Planning Schemes

Action:

- Prevent cumulative impacts from mining and energy industries on land and soil assets and function in the Queensland Murray-Darling Basin.

- Prevent direct impacts from mining and energy industries activities.

  a. No disturbance to the soil asset where the structure or condition is impacted.

- Prevent impacts from mining and energy industries caused by direct disturbance to soil assets and function.

a. Activities not undertaken for areas defined as 'Good Quality Agricultural Land' under a modified state policy that defines areas of 'Premium Quality Agricultural Land'.

b. Minimise through appropriate planning and design, including identification of low risk areas in the landscape for mining and energy industry development.

c. Restrict causes of off-site impacts through movement of soil, salt and other contaminants and weeds, either directly or through landscape processes.

d. Restrict causing alteration to surface water flow systems and ground water flow systems.

e. Compliant with the existing State Planning Policy for the protection of Good Quality Agricultural Land.

f. Rehabilitation to its former function and value.

Regional targets for land and soil assets in the Queensland Murray-Darling Basin:

- *Land is managed in a sustainable manner and sufficient land is available to meet high value community and environmental needs.*
- *Salinity impacts on assets are reduced against baseline conditions, and salinity impacts in areas of high salinity hazard are avoided or minimised.*
- *Soil health targets are 'fit for purpose' where soil condition is maintained or improved, and soil degradation impacts have not increased against a baseline.*

Institutional Assets

Action:

a. The community should expect a more enduring and direct role in the planning, decision-making and implementation of natural resource policies and activities as they relate to mining and energy industry impacts.

b. Policy and legislative frameworks are consistent with community expectations with regard to natural resource management.

c. There is timely and public disclosure of changes to Environmental Management Overview Statements as initially agreed by the State Government, and subsequent proposed changes.

d. There is timely and public disclosure of monitoring requirements and subsequent results for the condition and trend of natural resource assets including site, total and cumulative impacts as they relate to the mining and energy industry.

e. Monitoring requirements and management are consistent within the defined asset and across mining and energy industry operations and report against site, total and cumulative thresholds.

f. The cumulative threshold for the region's natural resource assets are defined, and is the limit to which impact is no longer acceptable within the resource capability for a set timeframe.

Regional targets for institutional assets and community capital assets in the Queensland Murray-Darling Basin:

- *Improved institutional frameworks to engender sustainable natural resource management.*
- *Increase in private sector (non-government) investment and involvement in sustainable natural resource management.*
- *Robust regional bodies demonstrating leadership in sustainable natural resource management processes.*
- *Effective and comprehensive monitoring and evaluation programme in place.*

Aboriginal Interests and Cultural Assets

Action:

- Prevent cumulative impacts from mining and energy industries to aboriginal interests and cultural assets in the Queensland Murray-Darling Basin.

- The current legislative requirements apply.

Regional targets for aboriginal interests and cultural assets in the Queensland Murray-Darling Basin:

- *Increase Aboriginal participation in NRM.*
- *Improved knowledge and awareness of Aboriginal interests in NRM.*
- *Maintain and enhance significant cultural heritage sites that result in NRM outcomes.*